

WHAT IS CLAIMED IS:

1. A data communication system comprising:
a controller for setting a logical connection
relationship different from that set by other
5 controller, between a source node and one or more
destination nodes;

a source node for transferring object data divided
into one or more segments in an asynchronous
transferring by using the logical connection
10 relationship; and

one or more destination nodes for receiving the
object data transferred from said source node in the
asynchronous transferring.
- 15 2. A system according to claim 1, wherein said
source node effects the asynchronous transferring
continuously.
- 20 3. A system according to claim 1 or 2, wherein
said one or more destination nodes return response for
the asynchronous transferring.
- 25 4. A system according to claim 1, wherein the
logical connection relationship is discriminated by
connection ID set by each controller.
5. A system according to claim 4, wherein the

logical connection relationship is further discriminated by inherent information of each controller.

5 6. A system according to claim 4, wherein the logical connection relationship is further discriminated by a predetermined channel number.

10 7. A system according to claim 1, wherein the logical connection relationship is released by said controller or said destination node after the object data is transferred.

15 8. A system according to claim 1, wherein said one or more destination nodes inform said source node of initial information required for initial setting of the asynchronous transferring.

20 9. A system according to claim 8, wherein said source node effects the initial setting of the asynchronous transferring on the basis of the initial information.

25 10. A system according to claim 9, wherein said source node sets at least one of a size of one segment, a size of receiving buffer and destination address for commonly designating memory spaces of said one or more

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destination nodes.

11. A system according to claim 1, wherein said source node broadcasts the object data by using the
5 asynchronous transferring.

12. A system according to claim 1, wherein said source node writes the object data in a common memory space of said one or more destination nodes by using
10 the asynchronous transferring.

13. A system according to claim 1, wherein said one or more destination nodes store a common memory space of said destination nodes.
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14. A system according to claim 1, wherein the asynchronous transferring is based upon an asynchronous transfer system of IEEE 1394-1995 Standard.

20 15. A system according to of claim 1, wherein the asynchronous transferring is based upon an asynchronous streaming transfer system of IEEE 1394-a Standard.

25 16. A system according to claim 1, wherein the data communication system is a network of bus type.

17. A system according to claim 1, wherein the

data communication system is a network based upon IEEE 1394-1995 Standard.

18. A system according to claim 1, wherein the
5 data comprising one or more segments is at least one of
still image data, graphic data, text data, file data
and program data.

19. A data communication system comprising:
10 a controller for setting a logical connection
relationship different from that set by other
controller, between a source node and one or more
destination nodes;
15 a source node for broadcasting object data divided
into one or more segments by using the logical
connection relationship; and
one or more destination nodes for receiving the
object data broadcasted from said source node.

20 } 20. A data communication system comprising:
a controller for setting new logical connection
relationships between a source node and one or more
destination nodes;
a source node for transferring object data divided
25 into one or more segments in an asynchronous
transferring by using one of the logical connection
relationships; and

one or more destination nodes for discriminating
the logical connection relationship and for receiving
the object data.

- 5 21. A data communication system comprising:
 a controller for setting new logical connection
relationships between a source node and one or more
destination nodes;
- 10 a source node for broadcasting object data divided
into one or more segments by using one of the logical
connection relationships; and
- 15 one or more destination nodes for discriminating
the logical connection relationship and for receiving
the object data.
- 20 22. A data communication system comprising:
 a source node for successively transferring object
data divided into one or more segments in an
asynchronous transferring by using one of a plurality
of logical connection relationships set between a
plurality of nodes; and
- 25 one or more destination nodes for discriminating
one of the plurality of logical connection
relationships and for receiving the object data.
- 25 23. A data communication system comprising:
 a source node for successively broadcasting object

data divided into one or more segments by using one of
a plurality of logical connection relationships set
between a plurality of nodes; and
one or more destination nodes for discriminating
5 one of the plurality of logical connection
relationships and for receiving the object data.

24. A data communication method comprising steps
of:

10 setting a logical connection relationship
different from that set by other controller, between a
source node and one or more destination nodes;
transferring object data divided into one or more
segments in an asynchronous transferring by using the
15 logical connection relationship; and
receiving the object data transferred in the
asynchronous transferring.

25. A data communication method comprising steps
of:

setting a logical connection relationship
different from that set by other controller, between a
source node and one or more destination nodes;
broadcasting object data divided into one or more
25 segments by using the logical connection relationship;
and
receiving the object data broadcasted from the

source node.

Sub A4 > 26. A data communication method comprising steps of:

- 5 setting new logical connection relationships between a source node and one or more destination nodes;
- transferring object data divided into one or more segments in an asynchronous transferring by using one
10 of the logical connection relationships; and
discriminating the logical connection relationship and receiving the object data.

27. A data communication method comprising steps of:

- 15 setting new logical connection relationships between a source node and one or more destination nodes;
- broadcasting object data divided into one or more segments by using one of the logical connection
20 relationships; and
discriminating the logical connection relationship and receiving the object data.

25 28. A data communication method comprising steps of:

- successively transferring object data divided into

one or more segments in an asynchronous transferring by
using one of a plurality of logical connection
relationships set between a plurality of nodes; and
discriminating one of the plurality of logical
connection relationships and receiving the object data.

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29. A data communication method comprising steps
of:

successively broadcasting object data divided into
10 one or more segments by using one of a plurality of
logical connection relationships set between a
plurality of nodes; and
discriminating one of the plurality of logical
connection relationships and receiving the object data.

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30. A data communication method comprising steps
of:

setting a logical connection relationship
different from that set by other controller, between a
20 source node and one or more destination nodes; and
informing said source node and said one or more
destination nodes of the logical connection
relationship.

25 31. A data communication method comprising steps
of:

discriminating a plurality of logical connection

relationships set between one or more destination nodes; and

transferring object data divided into one or more segments in an asynchronous transferring by using one of the logical connection relationships.

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32. A data communication method comprising steps of:

discriminating a plurality of logical connection relationships set between source nodes; and receiving object data transferred from said source node in an asynchronous transferring and divided into one or more segments by using one of the logical connection relationships.

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33. A communication apparatus comprising:

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a means for setting a logical connection relationship different from that set by other controller, between a source node and one or more destination nodes; and

a means for informing said source node and said or more destination nodes of the logical connection relationship.

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34. A communication apparatus comprising:

a means for discriminating a plurality of logical connection relationships set between one or more

destination nodes; and

a means for transferring object data divided into one or more segments in an asynchronous transferring by using one of the logical connection relationships.

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35. A communication apparatus comprising:

a means for discriminating a plurality of logical connection relationships set between source nodes; and

10 a means for receiving object data transferred from said source node in an asynchronous transferring and divided into one or more segments by using one of the logical connection relationships.

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